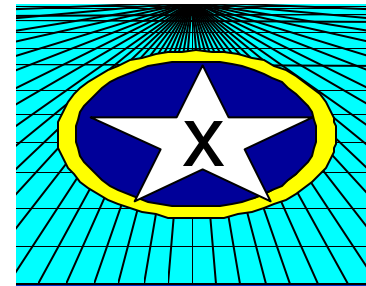


Advanced Concepts & Technologies



Sea Based Rapid Prototyping



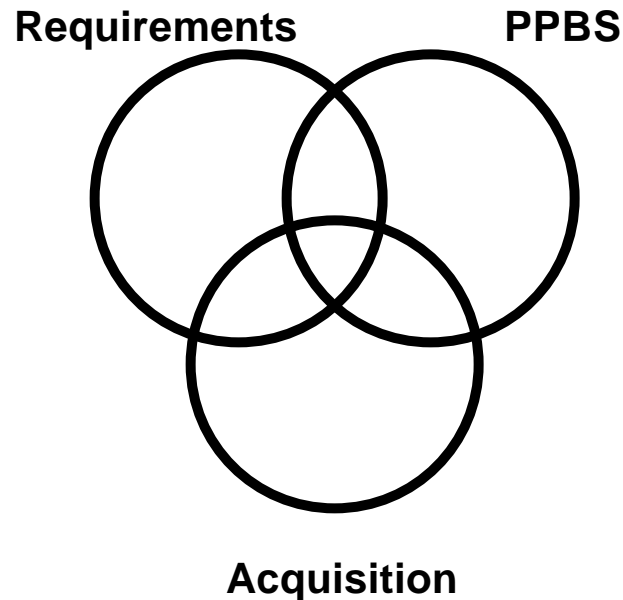
Experimental Fleet Projects

*“The difficulty lies not in the
new ideas but in escaping
from the old ones”*

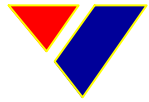
PD 13X



Operational Capability Gaps



Operational forces will face situations that our requirements, budget, and acquisition processes did not anticipate.



Thesis for Sea Based Rapid Prototyping

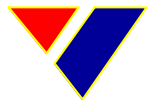
Operational forces will face situations that our requirements, budget, and acquisition processes did not anticipate.

For Example:

Consequence Management

Humanitarian Assistance & Disaster Relief

Open Source Intelligence



Thesis for Sea Based Rapid Prototyping

- Emerging commercial technologies are having a positive impact on military operations and systems in the 21st century
- Sea Based Rapid Prototyping places technical and acquisition people alongside operators so they can watch how operators employ existing capabilities and adapt to dynamic solutions



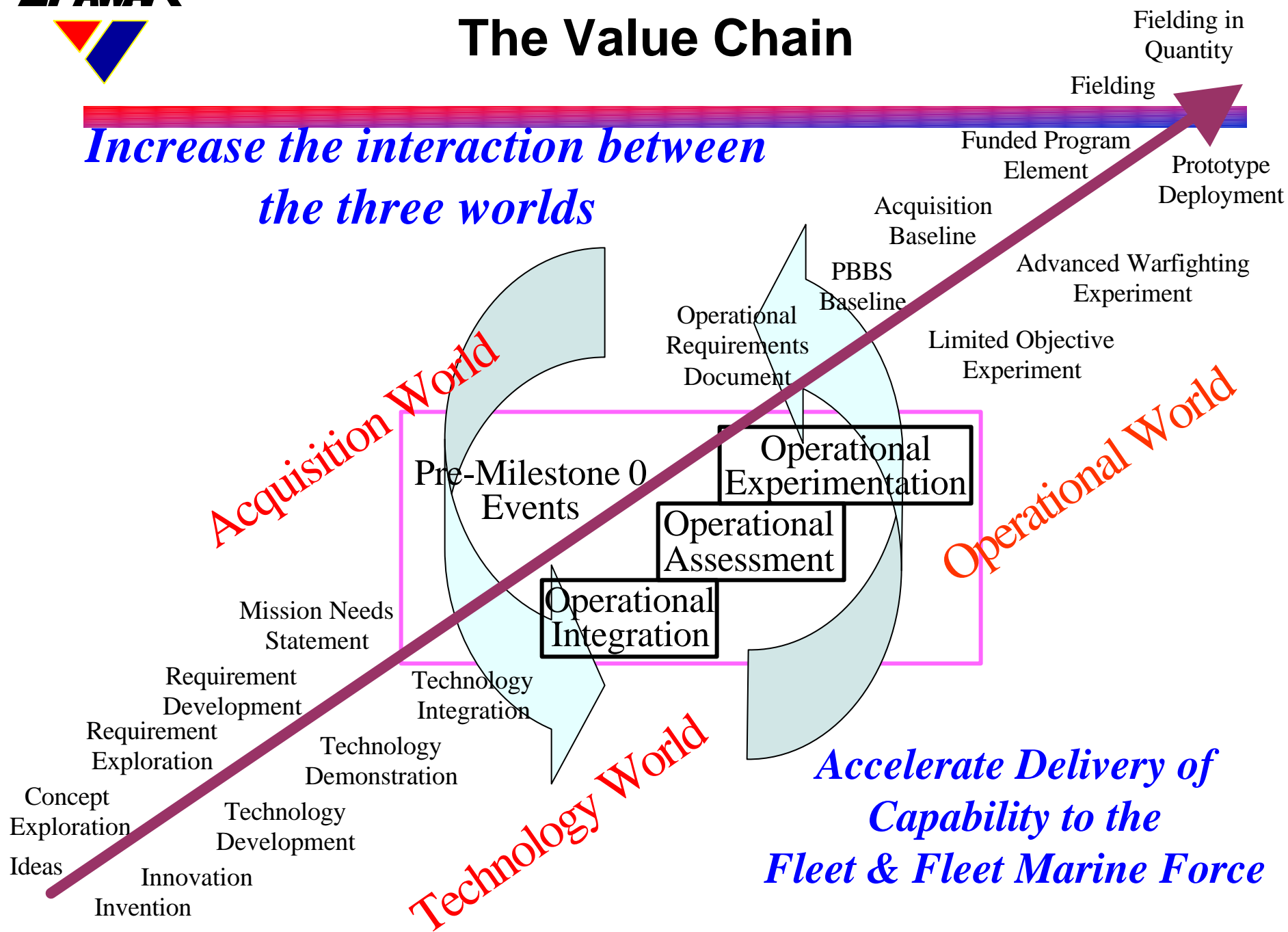
Adaptive Capabilities

Goal:

Design flexibility into operations and systems that allow warfighters to rapidly and easily adapt to evolving threats with evolving capabilities



The Value Chain





Topics

- Sea Based Rapid Prototyping
- Product Development Value Chain
- Sea Based JTF Operations
- Operational Experimentation Venues



Topics

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- Sea Based JTF Operations
- Operational Experimentation Venues
- Campaign Battle Management Capability
- Modular Mission Package
- Levels of Criticality and Assured Power
- Cross Domain Technology Transfer

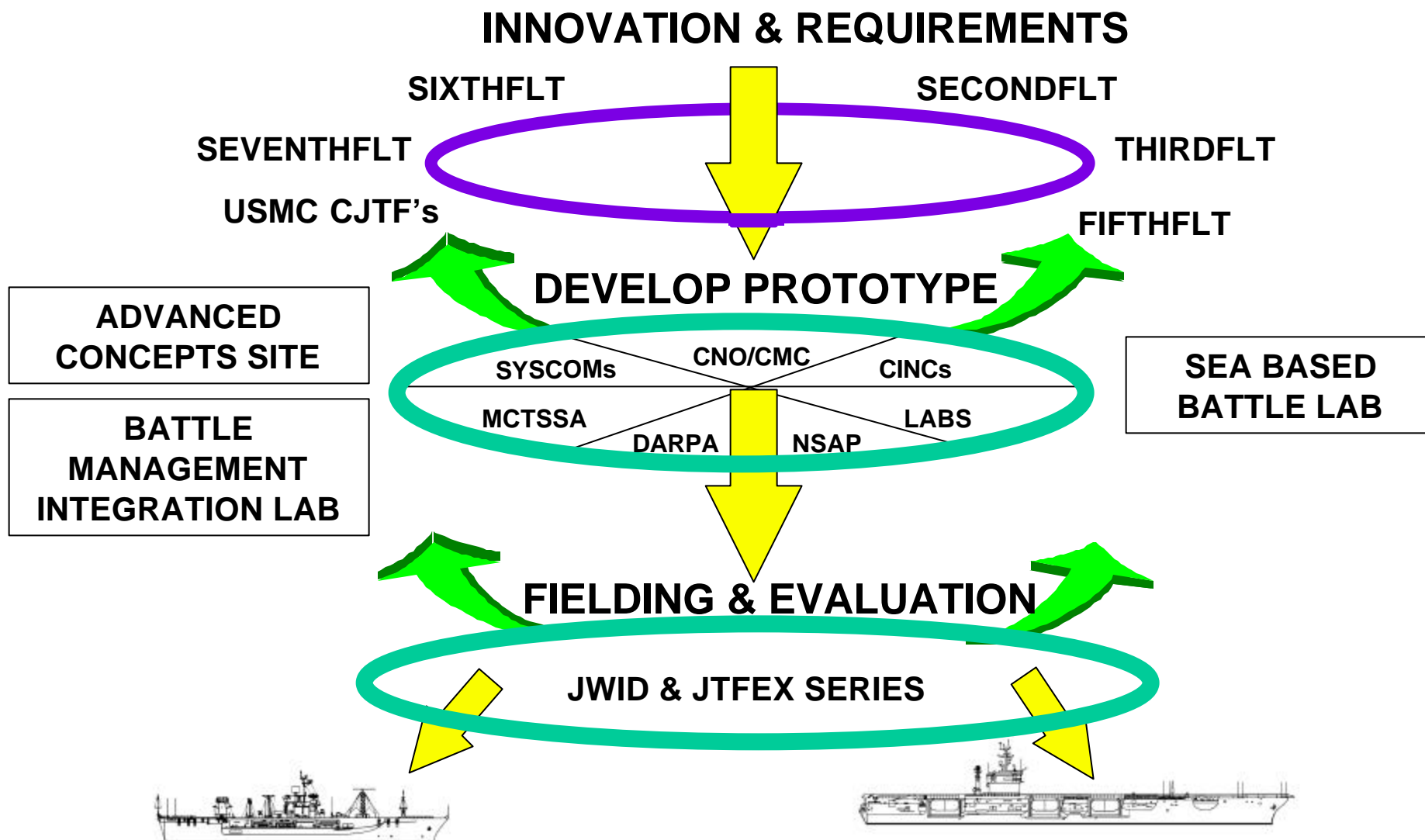


Topics

- Sea Based Rapid Prototyping
- Product Development Value Chain
- Sea Based JTF Operations
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- Sea Based Rapid Prototyping
- Product Development Value Chain



Sea Based Rapid Prototyping Process





Operational Employment of Maritime and Sea-Based Joint Task Forces

**Sea-Based
Joint Task Force:**

WHY?



Operational Employment of Maritime and Sea-Based Joint Task Forces

★ During the Cold War,

THE UNITED STATES HAD 172 BASES ON FOREIGN SOIL WITH NEARLY FREE ACCESS.

★ At Present,

THE UNITED STATES HAS LESS THAN 27 BASES ON FOREIGN SOIL...

AND ALL HAVE SIGNIFICANT RESTRICTIONS.



Operational Employment of Maritime and Sea-Based Joint Task Forces

★ Sea-Based, Mobile Forces

WILL MOST LIKELY BE THE FIRST ON-STATION FOR
MILITARY RESPONSE OR DISASTER RELIEF.

★ Naval Command & Control Packages

AND FORCE PACKAGES MUST BE OPTIMIZED FOR
MARITIME AND JOINT TASK FORCE OPERATIONS.



Operational Employment of Maritime and Sea-Based Joint Task Forces

Concept of Operations:

Command & Control.... *From the Sea*

Dominate the Battlespace

***Succeed in Operations other than War, and
Be Ready for Contingencies...***

Operational Employment

- ***Independent Operations***
- ***Naval Expeditionary Task Force***
- ***Maritime Component Task Force***
- ***Sea-Based Joint Task Force***
- ***Coalition Task Force***

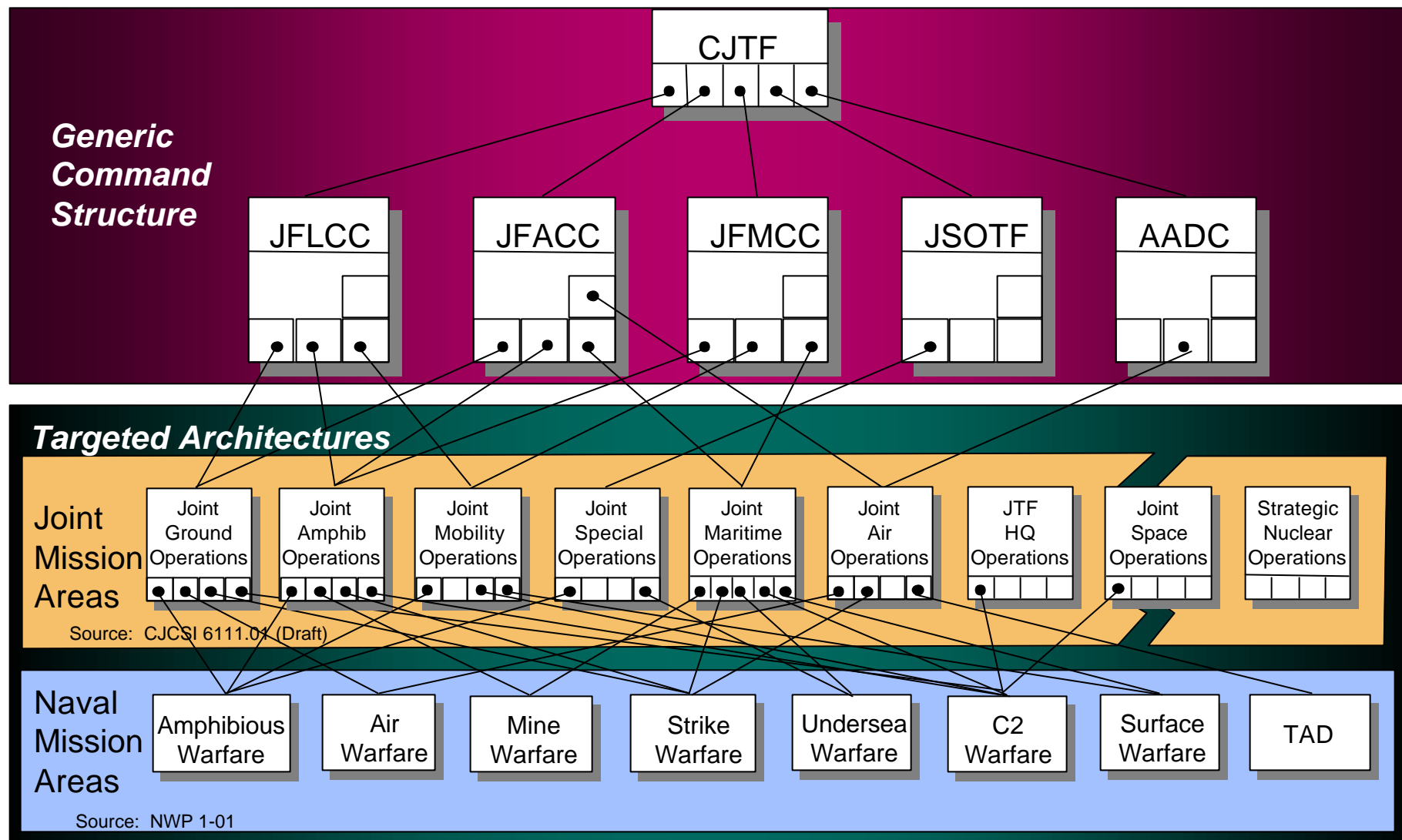
Operational Requirements

- ***Interoperable***

Command & Control , Connectivity, and Doctrine

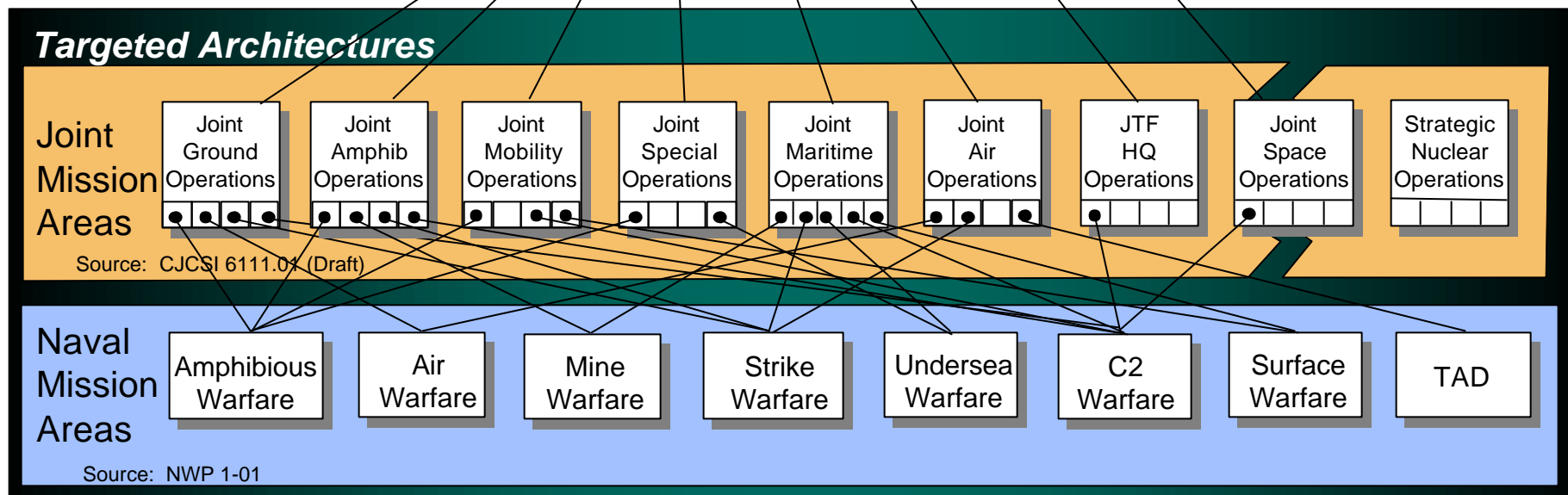
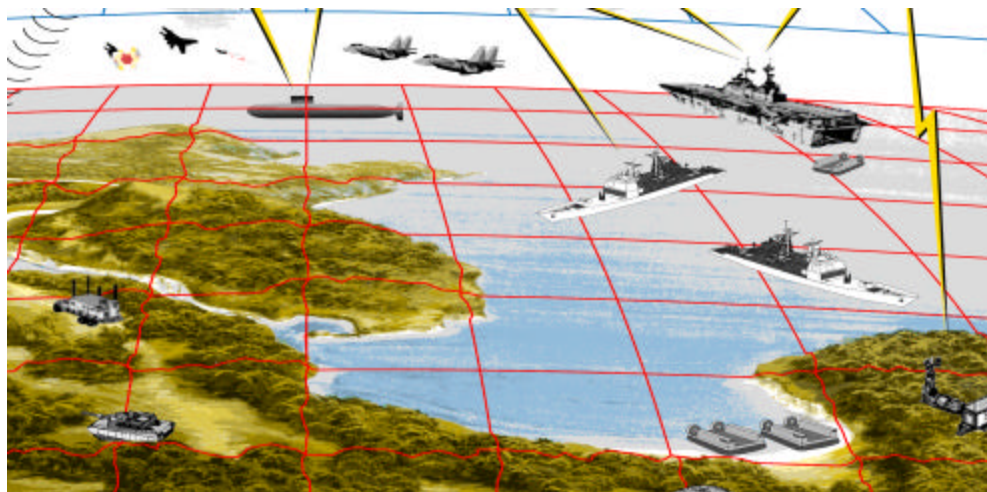


Operational Architecture



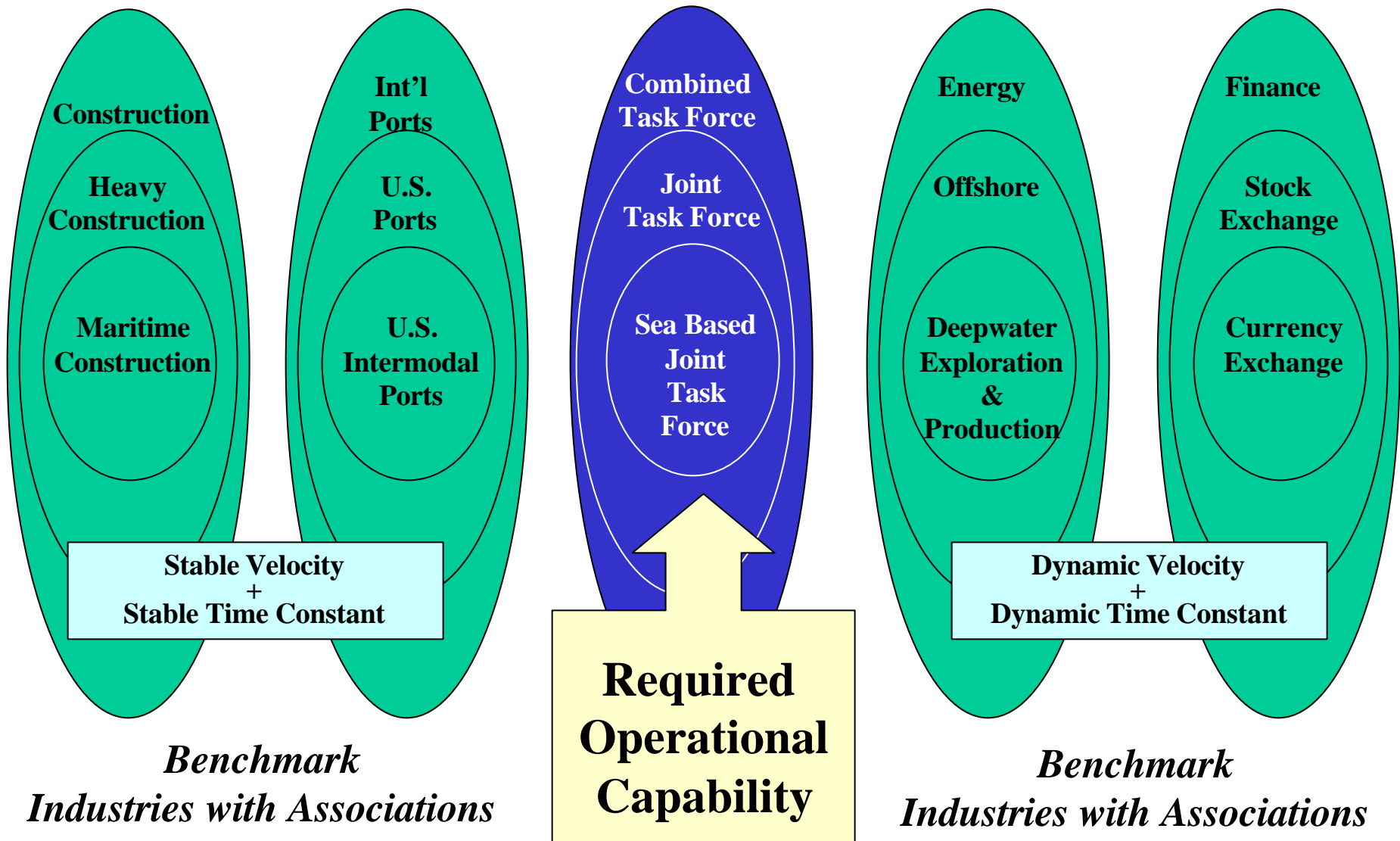


Network Centric Battle Management



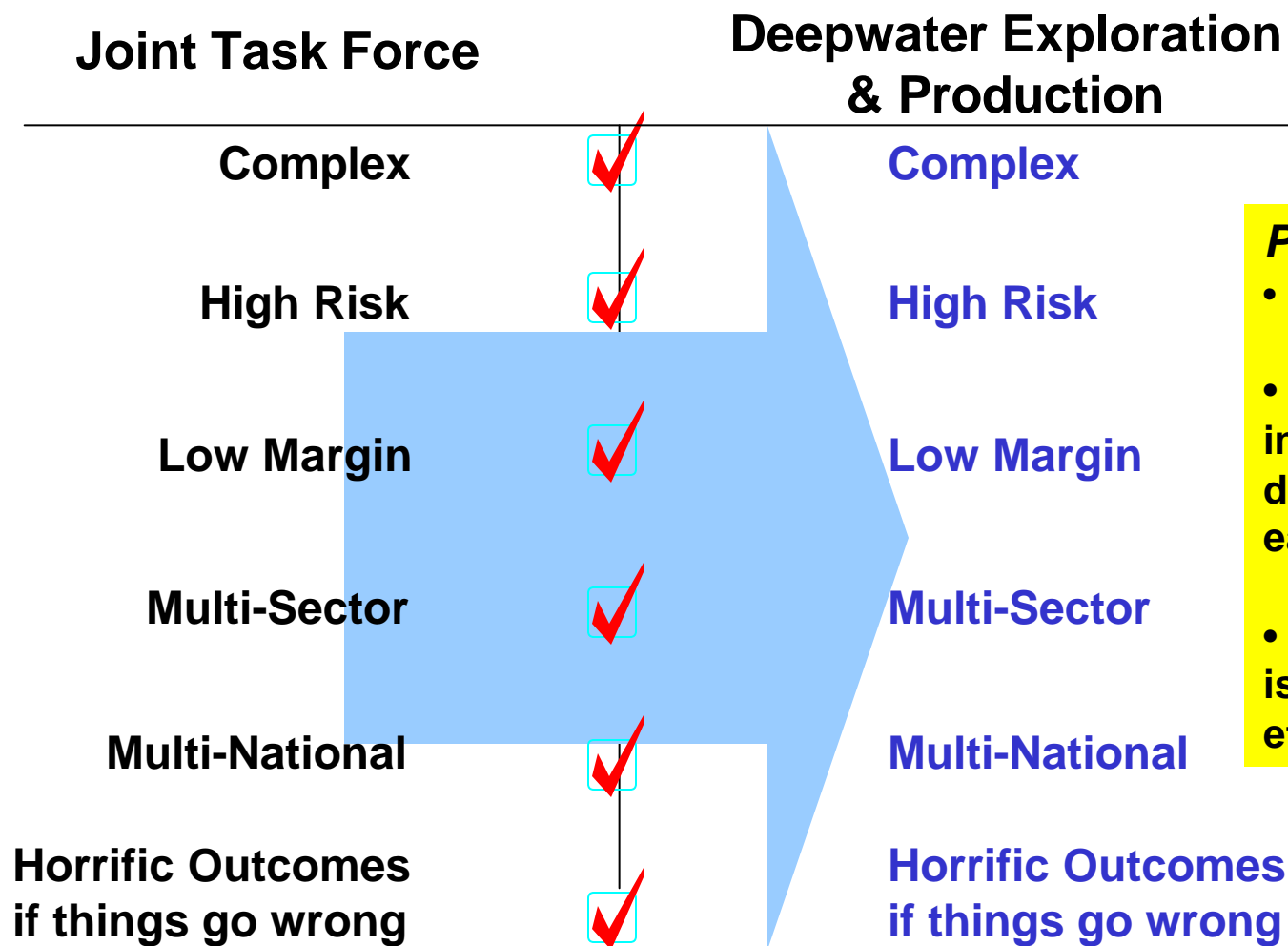


Warfighting Unit of Issue





Characterize Operations



PLUS:

- For Profit
- If they come to impasse, they don't get to shoot each other
- So, maybe there is a collaborative effort



Analyze Mission Essential Tasks as a Function of Criticality

-Insertion & Extraction
-MIO/VBSS
-CSAR
-SAR
-MEDEVAC

V++ Life Critical 6 S .00034%

V+ Time Critical

V Mission Critical

Vital



NV++Mission Essential

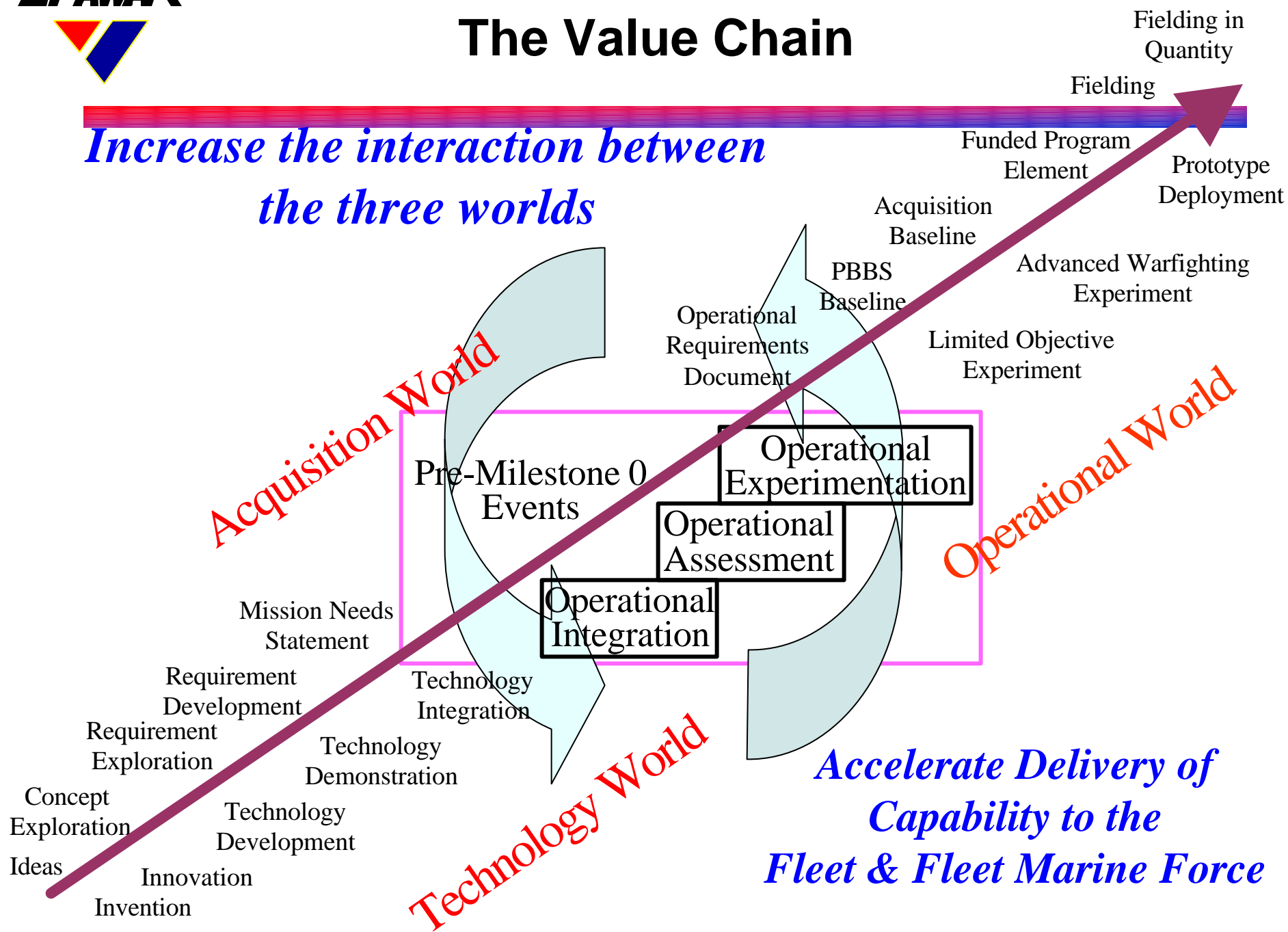
NV+ Mission Support

NV Quality of Life

Non-vital



The Value Chain





The Catalyst:

Generate Compelling Successes in Operational Environments

Opportunities for Operational Experimentation

Services

- Navy
- Marine Corps
- Army
- Air Force
- Coast Guard

FBL / CFBL

JWID

LOE

AWE/FBE

SBBL

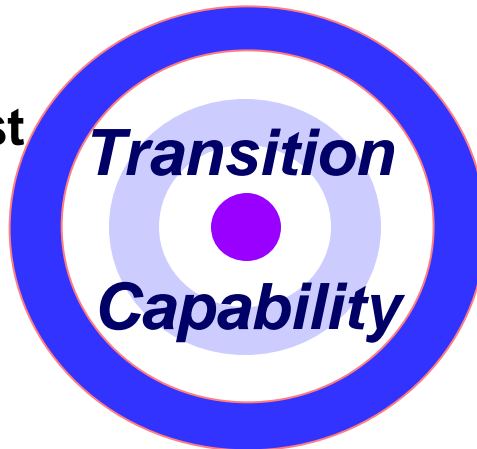
Joint Ventures

Technology Sources

- DARPA
- ONR
- Service Labs
- Industry

End User Needs

- CRWG Requirements List
- ORD
- MNS
- Fleet Feedback
- Wargames



Product Line Improvement

- PD15
- PD16
- PD17
- PD18

And Field in Quantity

Sea Based Battle Lab...

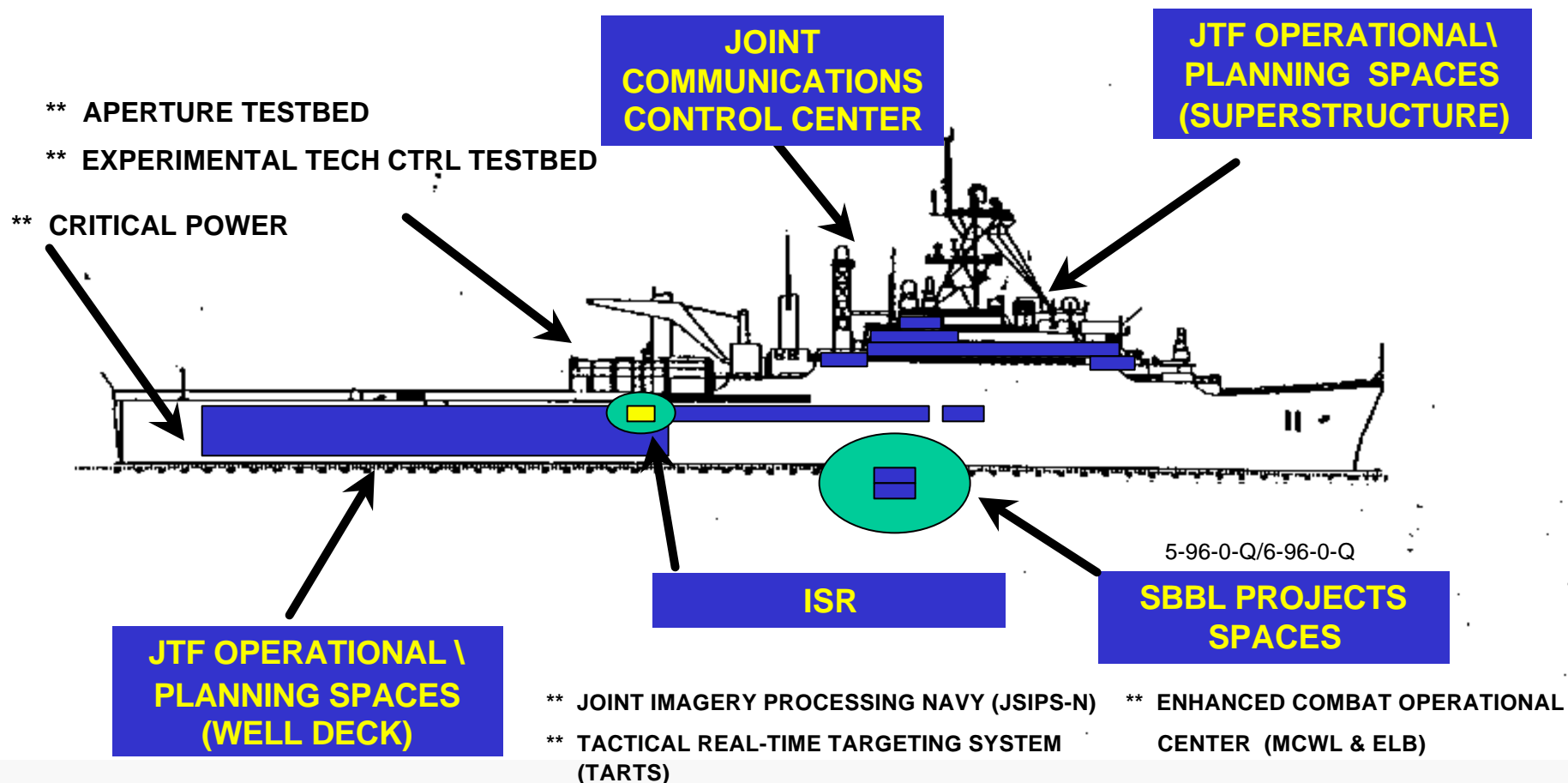
A Unique Capability





SBBL PROJECT SPACES

USS CORONADO





PMW 132 Mission

**...Accelerate delivery of advanced
C4ISR-T capabilities through
experimental fleet projects and
quality operational experiments**



PMW 132 Functions

Experimental Venues

- JE/JBC/FBL
- JWID/Allied
- SBBL
- ACS
- AWE/FBE
- CINC 21
- DARPA
- ONR/FNC

• *Customer Focused Innovation & Experimentation*

- *Map C4ISR-T builds to experiment concepts and experiment opportunities*
- *Fold experiment results into Fleet products*

**SPAWAR
Product Line**
(PDs/PMWs/PEO)



PMW 132 History

- Prior to Oct 98 - PD13X/PMW133X
 - Conducted Maritime Battle Center Pilot
 - Facilitated Project Spaces onboard SBBL
 - Established PD13 Advanced Concepts Site
 - Developed methodology for taking COTs/NDI technology into land-based limited objective experimentation environment - transition potential value added technologies to a sea-based experiment environment
 - CNO's Strategic Studies Group -adjunct membership
 - DARPA - established an ADDU relationship
- PMW132 Established Oct 98



PMW 132 Project Areas for FY 00

- JWID 00 Navy demo coordination and site (*N6*)
- Allied Interoperability/AUSCANZUKUS (*N6*)
- NCQ-70 assessment, integration to C3F SBBL, and LOE (*NAVSEA*)
- Federated Battle Lab (FBL) experiment coordination, design, participation, and assessment (*MBC*)
 - Mobility Enhancements for Tactical Networking
 - GPS Interference Situational Awareness
 - Joint Speech Recognition Applications
 - JTF Network Security Management
- Fleet Battle Experiment (FBE) F, G, H concept and technology support to MBC; SPAWAR liaison (*MBC*)
- Advanced Concept Site (ACS) Operational Assessments
- C3F Sea Based Battle Lab (SBBL) liaison
- Numbered Fleet Mission Package/Gap Analysis Experiment
- C5F Ops Center development (*N6*)
- SPAWAR JCC (X) team participant
- DARPA/SSG liaison



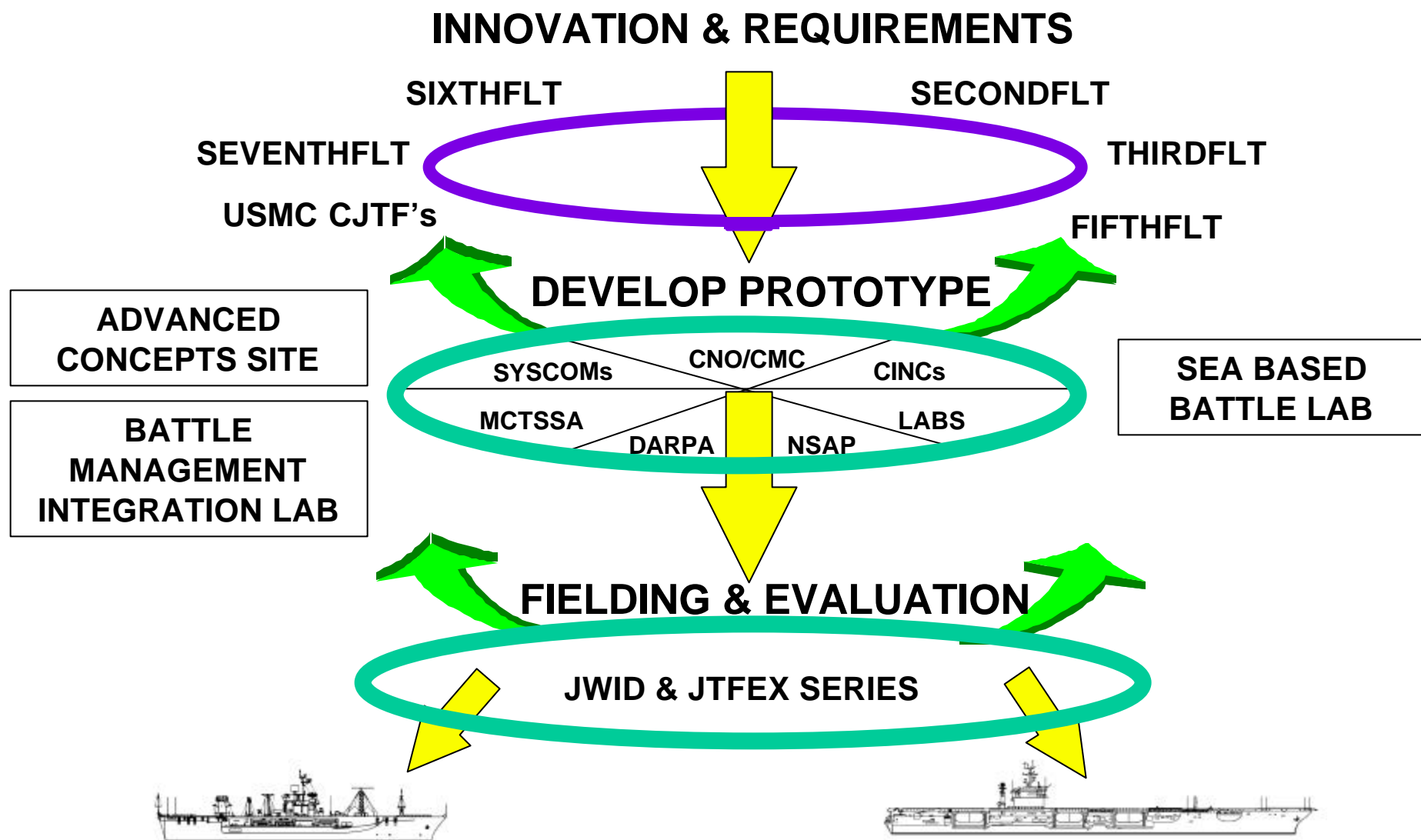
PD 13 & C3F / SBBL Relationship

Sea Based Battle Lab (SBBL)

- 3rd Fleet Command Ship (USS CORONADO)
- Director SBBL, J6, ADDU as PD 13B
- SBBL Project Spaces
- **Go-to-war platform available for technology insertion**
 - One-of-a-kind

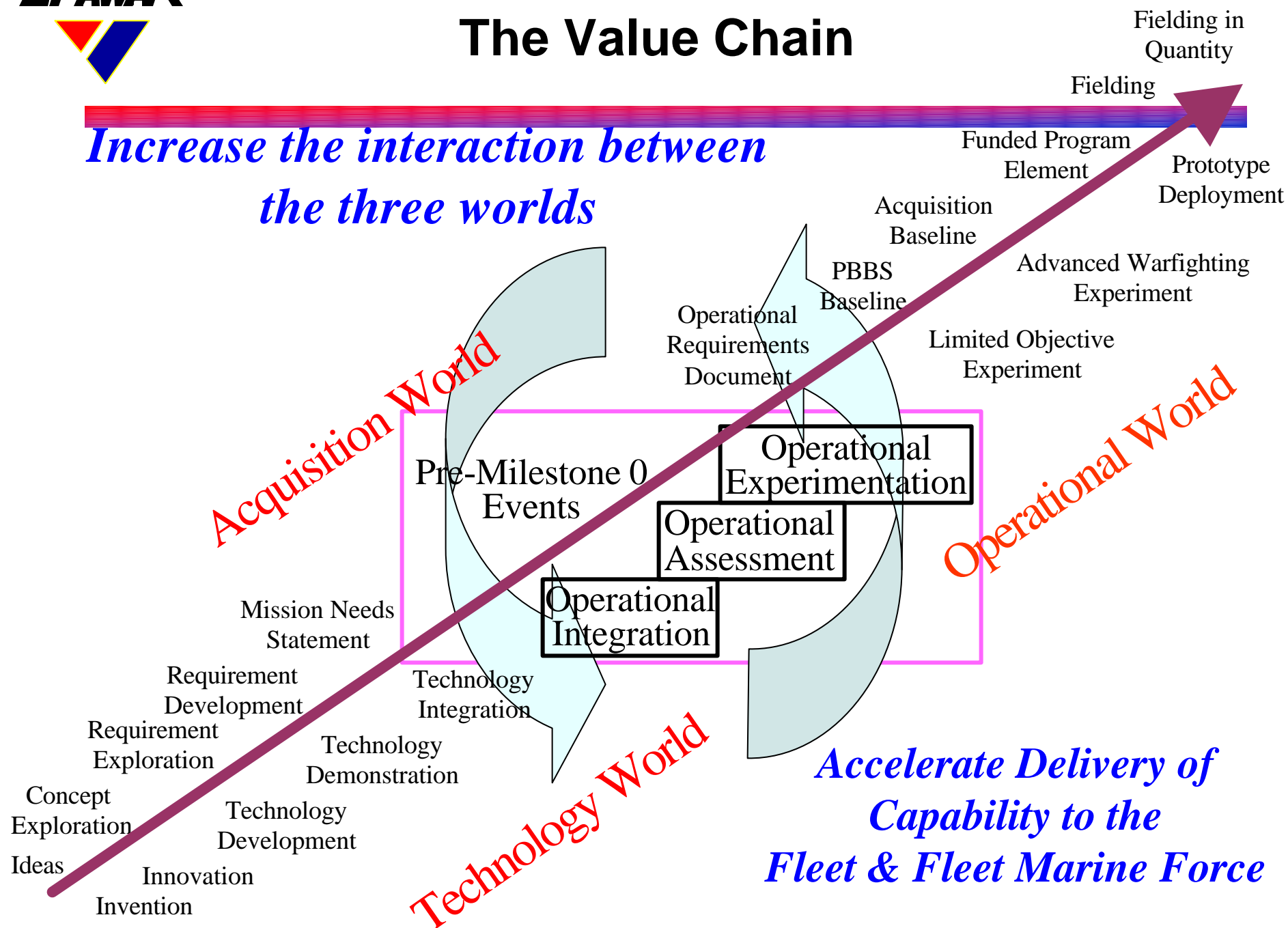


Sea Based Rapid Prototyping Process





The Value Chain



SPAWAR



Questions?